

PORTABLE COMPACT DISC PLAYER

DPC-451

INSTRUCTION MANUAL

KENWOOD CORPORATION

Note for use in automobiles

If you use the unit in your car, install it in a place not subject to direct sunlight. Also do not leave the unit in car when not in use, for this will cause damage to the unit such as deformation by direct sunlight.



B60-1889-08 (K,P,R) AP

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction. We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on the bottom of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

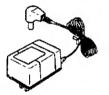
or sorvice on this proceed.	-	
Model	Serial Number	

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Accessories

• AC adaptor(1)



• Car battery adaptor(1)



• AC plug adaptor(1) (Except for the U.S.A. and Canada)



Car cassette adaptor(1)



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Special features

A Caution: Read this page carefully to ensure safe operation.

1. Three Power Supply System Dry batteries, car batteries, and household electric power can be used for the power supply. You can listen to music everywhere. uses digital memory to prevent sound skip caused by

shaking or shocks.

3. Program PlaybackUp to 20 tracks can be stored at random for playback in the programmed sequence.

4. Versatile Playback Functions Playback can be enjoyed with repetition of a single track. repetition of all tracks, introduction scanning, etc.

Before applying power

For the U.S.A. and Canada

Important!

Units shipped to the U.S.A. and Canada are designed for operation. on 120 volts AC only.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THE ACPLUGWITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

For other countries

Important!

Units shipped to countries other than the above are equipped with an AC voltage selector switch on the bottom cover of the AC adaptor. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

AC adaptor operates on 110~120 volts or 220~240 volts AC. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

AC voltage selector switch

TTTT110V-120V 220V-240V 110V-120V 220V-240V

Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

Safety precautions

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

The marking of products using lasers (Except for some areas).

> CLASS 1 **LASER PRODUCT**

This label is attached to the bottom panel and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

IMPORTANT SAFEGUARDS

⚠ Caution: Read this page carefully to ensure safe operation.

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

- Power sources The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- Power-cord protection Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
- Enclosure removal Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.
- 4. **Drop** Do not drop the unit or apply strong shock to it. (Damage due to dropping the unit is not covered by the warranty.)
- Ventilation Avoid hindering the ventilation of the unit by covering it with a cloth,
- Abnormal smell If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.
- Heat Avoid placing the unit under direct sunlight or near a source of heat such as heating equipment. Particularly, never leave it in an automobile or on the dashboard.
- 8. Temperature The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

- 9. Water and moisture The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
- **10. Dust and moisture** Avoid places where is dusty or where the humidity is high.
- **11. Vibrations** Avoid placing the unit on an unstable place such as a shelf or in a place subject to vibrations.
- **12. Magnetic fields** Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.
- 13. Cleaning Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.
- 14. Nonuse periods The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.
- 15. Damage requiring service The unit should be serviced by qualified service personnel when:
 - **A.** The power-supply cord or the plug has been damaged; or
 - **B.** Objects have fallen, or liquid has been spilled into the unit; or
 - C. The unit has been exposed to rain; or
 - **D.** The unit does not appear to operate normally or exhibits a marked change in performance; or
 - **E.** The unit has been dropped, or the enclosure damaged.
- 16. Servicing The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

In case of abnormality, immediately unplug the AC adaptor or car battery adaptor from the power outlet. Then please contact your nearest KENWOOD service center.





Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion — and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- · Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

Set the dial and leave it there.

Deathat

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Example
Quiet library, soft whispers
Living room, refrigerator, bedroom away from traffic
Light traffic, normal conversation, quiet office
Air conditioner at 20 feet, sewing machine
Vacuum cleaner, hair dryer, noisy restaurant
Average city traffic, garbage disposals, alarm clock at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

90	Cubicou postorougle touch testi-
30	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

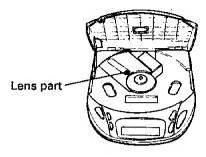
Information courtesy of the Deafness Research Foundation.

Before operation

■ Simple maintenance

Lens maintenance

Stain on the laser pickup lens may cause sound skip or other troubles making CD playback impossible. Clean the lens using a commercially-available camera blower, etc. Do not use commercially-available lens cleaner or disc cleaner.



Cabinet maintenance

If the cabinet becomes dirty, wipe with a soft, dry cloth. Serious stain or dirt can be wiped with a wet cloth. Do not use benzine or thinner for these may damage the unit.

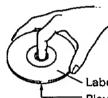
Taking care of the plug

Wipe the plug with a dry, soft cloth and always keep it clean, A dirty plug can cause noise or erroneous operation.



Cleaning

Disc handling precautions



Handling

Hold compact discs so that you do not touch the playing surface.





beco

If fingerprints or foreign matter become attached to the disc, lightly wipe the disc with a soft cotton cloth (or similar) from the center of the disc outwards in a radial manner.



Do not attach paper or tape to either the playing side or the label side of compact discs.



Storage

When a disc is not to be played for a long period of time, remove it from the CD player and store it in its case.

Caution on disc used





Never play a cracked or warped disc.

During playback, the disc rotates at high speed in the player. Therefore, to avoid danger, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent.

Condensation

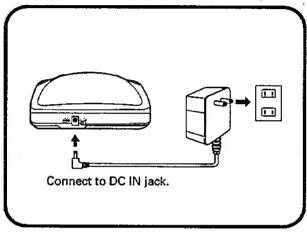
When the unit is used immediately after a heater has been turned on, or if it is used
in a damp or humid room, condensation may be formed on the lens inside the unit,
resulting in malfunction. In such a case, leave the unit OFF for about an hour
before inserting a disc and starting playback.

Power supplies

This unit can be powered with batteries, a household power supply, a car battery, and other power sources. For battery operation, use commercially-available alkaline batteries or rechargeable batteries (NB-77/NB-88).

When the unit is not used for a long time (a week or more), remove the batteries from the unit.

■ Operation on household power supply

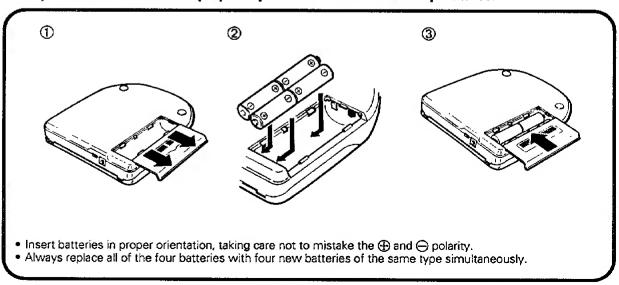


Caution in use of AC adaptor:

- Never use other AC adaptor than that supplied with this unit.
- When the unit is not to be used, unplug the AC adaptor from the power outlet.

Operation on alkaline batteries

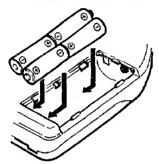
When the unit is to be powered from batteries, use commercially sold "LR6" alkaline batteries. They make about 5 hours of playback possible under normal temperatures.

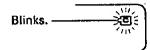


Operation on rechargeable batteries (OPTIONAL)

Be sure to recharge the batteries when they are used for the first time, when they have not been used for a long period or when the low voltage warning indicator () is blinking. When the batteries have been fully charged for about 8 hours, about 2 hours of playback can be obtained at normal temperatures. Use only NB-77/NB-88 rechargeable batteries, which are sold separately. Do not use batteries other than the specially designated rechargeable batteries.

Insert rechargeable batteries.

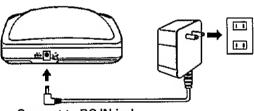




- Insert them taking care not to mistake the orientations of the ⊕ and ⊖ poles.
- Batteries cannot be recharged during playback.
- A rechargeable battery can be recharged about 500 times. When the operable period shortens, please purchase new optional rechargeable batteries (NB-77/ NB-88).

2 Start recharging.

- ① Confirm that all indicator lights are OFF.
- ② Connect the AC adaptor.



Connect to DC IN jack.

- Recharging completes in about 8 hours.
- 3 After charging, disconnect the AC adaptor from the wall outlet and the unit.
- Be sure to shut the cover of the unit during recharging.
- Avoid recharging the battery for more than 8 hours.

ATTENTION

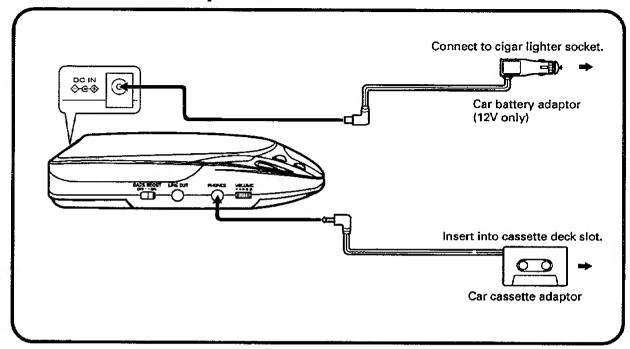
Nickel-Cadmium battery must be recycled or disposed of properly. State laws may vary regarding the handling and disposal of Nickel-Cadmium batteries.

Please contact your Authorized KENWOOD Dealer for more information.

Note:

As an inherent characteristic of rechargeable batteries, the charging capacity drops if a battery is recharged several times while the charge remaining in it is large. In such a case, the original charging capacity can be recovered gradually by recharging it only after the charge has been exhausted completely several times.

■ When a car battery is used



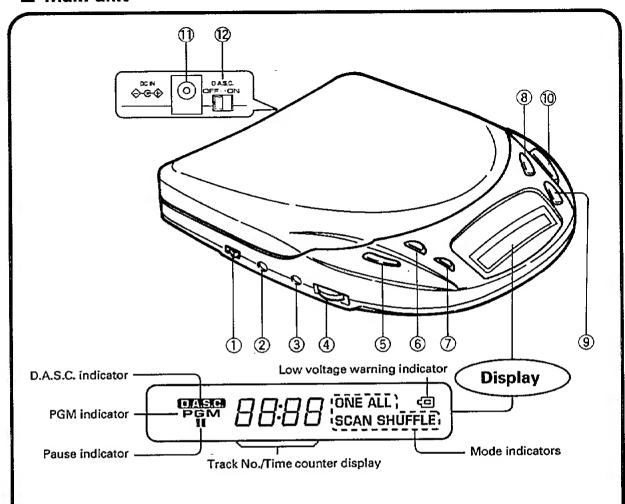
- Place the unit in a stable position not subject to the vibrations of the car.
- The plug may not match the cigar lighter socket of some car models.
- If sound is not produced, change the tape playing direction of the car stereo.
 (Sound is not produced if the car stereo is set to play tape side B.)
- The sound reproduction may not be possible with some car stereo models.

Notes:

- 1. If the unit cannot be operated with the car battery adaptor connected, suspect the possibility of a blown fuse. The fuse can be replaced by turning the electrode on the tip of the adaptor plug. When replacing the fuse, be sure to use a fuse with a rating of 1 A.
- 2. Do not leave the products or batteries in the car, particularly above the dashboard, for this may lead to malfunction or damage due to solar heat.
- 3. When the unit is not used, unplug the car battery adaptor. (Otherwise, the car battery may run out, with some car models.)
- 4. If the unit is connected to a car stereo using an audio cord, noise may sometimes interfere.

In case of abnormality such as smoke production, immediately unplug the car battery adaptor from the cigar lighter socket.

■ Main unit



1 BASS BOOST switch

Changes the sound quality.

② LINE OUT iack

This is used for connection of other equipment.

③ PHONES jack (Headphones)

Insert a car cassette adaptor or a headphone mini-plug.

4 VOLUME knob

Adjusts volume.

⑤ OPEN key

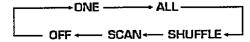
Press to open the top cover.

6 MEMORY key

Used to program track sequence.

7 MODE key

Enables various playback operations.



® PLAY/PAUSE key

When pressed, power is automatically turned ON and playback starts. When pressed during playback, playback is paused; when pressed again, playback is resumed.

Stops playback. Power is automatically turned OFF when playback is stopped.

(10) SKIP/SEARCH keys

Used to skip a track or for fast forward/rewind operation.

(f) DC IN jack (External DC power input)

For use with an external power supply.

1 D.A.S.C. switch

Guard against sound skip operates when the switch is set to ON.

Guard against sound skip

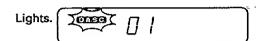
The D.A.S.C. stores digital data corresponding to about 1 second of CD playback in memory and reads this data as it plays music. This guards the listener from being troubled by sound skip even in case signal reading error occurs.

D.A.S.C.: "Digital Anti-Shock Circuit"

■ For setting to guard against sound skip

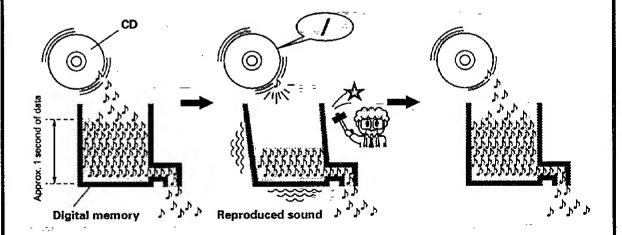


 Playback sound is interrupted when the switch position is changed.



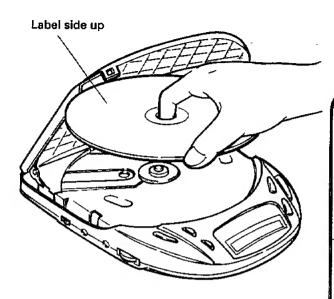
- In case of vibration above a certain degree, the memory data may be exhausted and the guard from sound skip may become temporarily ineffective.
- The use of the D.A.S.C. consumes the battery power quickly. When playing the unit in a place not subject to vibration, be sure to set the switch to the OFF position.





During playback, the CD is rotated at double the normal speed and the sound data of approx. 1 second beyond the present playback position is stored in memory. When the readout from the CD is interrupted due to a vibration or shock, the sound data read from the memory is not interrupted.

The amount of stored data recovers so that the circuit can deal with the next possible shock.

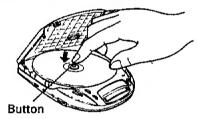


■ To insert a disc

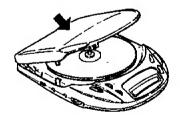
Open the cover.



2 Insert a disc.

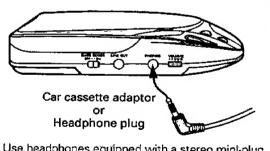


- Fit the center pivot into the disc hole and press the button.
- 3 Close the cover.



 Press down the left front side of the cover until it locks in place with a click.

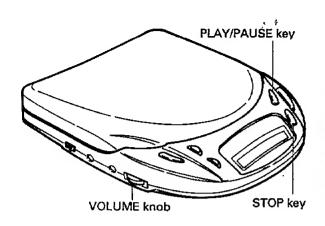
■ Connecting to PHONES jack



- Use headphones equipped with a stereo mini-plug.
- The unit does not include headphones as an accessory.

8 cm single CD

• This unit can play 8 cm single CD directly, without the help of an adaptor. (Do not use single CD adaptor sold in audio or record stores, for this may lead to malfunction.)



Pausing playback

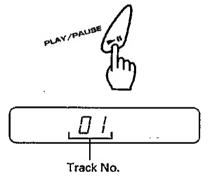


Sing [] |

• Press again to resume playback.

■ Normal playback

Start playback.



- When the //II key is pressed, the power comes ON and playback starts.
- Each time the MEMORY key is pressed, the track No. and time of the selection being played are displayed alternately.

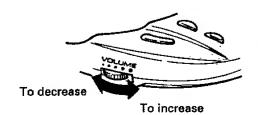
To stop playback



10

- Total track No. and total playing time are displayed alternately.
- The power will go OFF after about 5 sec.

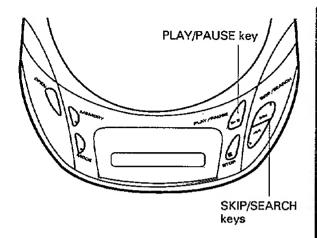
2 Adjust the volume.



AUTO POWER OFF

- When the key is pressed during playback, the power will be automatically turned OFF within about 5 sec.
- The power will be automatically turned OFF within about 5 sec. after the track has ended.

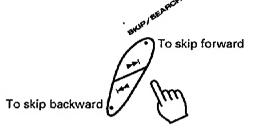
Starting playback from the desired track



■ Track search

Specifying the skip destination track

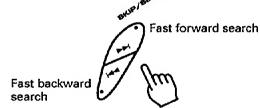
Tap lightly the SKIP/SEARCH keys corresponding to the direction you want to skip during playback.



- The same number of tracks as the number of times the key is tapped are skipped.
- When the explanation will be replayed from the beginning.
- To skip the track in the stop mode, press the ►►, let key, then press the ►/III key.

Fast forward or fast backward search

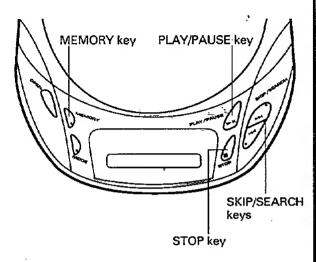
Press and hold the SKIP/SEARCH keys corresponding to the direction you want to search during playback.



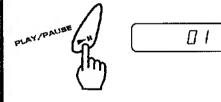
Normal playback resumes from the position you release the key.

Programmed playback

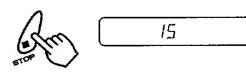
20 tracks can be programmed into the memory in any order. Once 20 tracks have been programmed into the memory, Full is displayed, indicating that no more tracks can be programmed.



- Programmed playback procedure
- 1 Start playback.



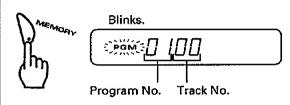
- The power comes ON and playback starts.
- 2 Enter the stop mode.



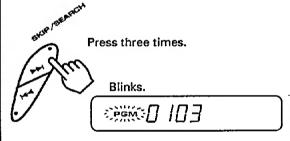
Proceed to step 3 within about 5 sec.

3 Initiate the program mode.

Press the MEMORY key.



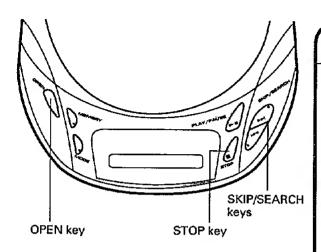
- Carry out step 4 within about 30 sec.
- 4 Program desired tracks in the desired order.
- ① Select a track.
 To select track No. 3 as program No. 1:



- Carry out step ② within about 30 sec.
- ② Press the MEMORY key.

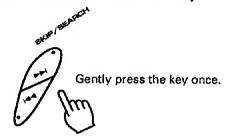


- Program other desired tracks by repeating steps ① and ② for each track.
- Up to 20 tracks can be programmed.
- Proceed to step 5 within about 30 sec.
- 5 Start playback.
 Press the PLAY/PAUSE key.
- Pressing the key once again will cause playback to pause.



■ Checking the program contents

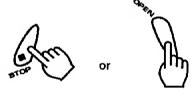
- 1 Enter the playback mode.
- 2 Press the SKIP/SEARCH keys.



 The programmed track is displayed each time the key is pressed.

■ Canceling the program

Press the STOP key twice or OPEN key.



 The program is canceled even during AUTO POWER OFF operation.

Special playback operations

Various playback operations are ava	ilable by pressing the MODE	kev during playback opera-
tion.		mel merma brejenen ebeta

→ One-track repeat → All-track repeat ————	
OFF ← Scan playback ← Shuffle playback ←	

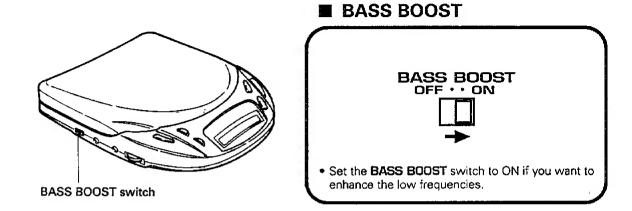


Each time the MODE key is pressed, the play mode is switched to the next mode.

ONE	One-track repeat The track being played will be played back repeatedly.	[] / ZONE I
ALL	All-track repeat All tracks on the disc will be played repeatedly.	
SHUFFLE	Shuffle All tracks on the disc are selected and played back at random. If the shuffle playback mode is initiated during normal playback, the shuffle playback starts after the track being played has completed. The SHUFFLE mode cannot be selected during program play.	OB JEHUFFLEX
SCAN	Scan playback The intro to each track will be played for 10 sec. each. If the intro scan mode is initiated, intro-scan playback starts from the beginning of the first track on the disc.	[] / ISCANI
OFF	Cancellation Normal playback mode resumes.	

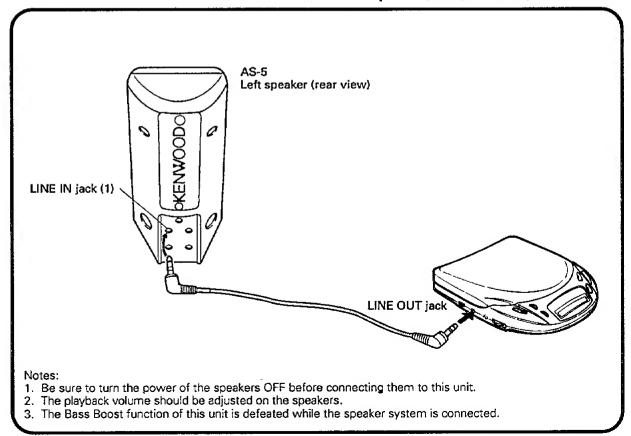
Varying the tone

This unit has the Bass Boost function which allows to enjoy more powerful sound by enhancing the low frequencies. Switch this function ON or OFF to select the tone you like.



Listening through speaker system (option)

This unit can be connected to the KENWOOD's Active Speaker (AS-5, AS-7 etc.).



In case of difficulty

What seems to be a serious trouble is often due to simple mistake. In case of trouble, check it again by referring to the table below.

Note that servicing may be charged if it is requested based on the following symptoms.

Symptom	Cause	Remedy
Operation does not occur when an operation key is pressed.	The batteries are exhausted. The disc is placed upside down.	 Replace both of the four alkaline batteries, or recharge the rechargeable batteries. Place the disc with the label side facing upward.
	Dew is condensed inside the unit.	Leave the unit for about an hour before use.
	The AC adaptor is disconnected.	Connect it properly.
No sound is output through headphones.	 The headphones plug is connected incompletely. The volume is OFF. 	 Insert it securely into the PHONES jack. Adjust the volume.
Sound skips or interrupts.	 The D.A.S.C. switch is set to "OFF". A strong vibration that exceeds the capacity of the D.A.S.C. occurred. The disc is dirty. The internal lens is dirty. The headphones plug is dirty. The batteries are exhausted. 	 Set the D.A.S.C. switch to "ON". Place the unit in a place not subject to vibrations. Clean it. Clean it. Clean it. Recharge or replace them.
Noise is heard.	 The headphones plug is dirty. The batteries are exhausted. The headphones plug is connected incompletely. 	Clean it. Recharge or replace them. Insert it securely into the PHONES jack.
Charging is not possible.	 Rechargeable batteries other than the special ones are being used. 	Please use the special rechargeable batteries (NB-77/NB-88).

Notes

- 1. Since this unit is equipped with a microcomputer, miscellaneous noise or interference noise from external sources may cause the unit to malfunction. In such a case disconnect the battery and AC adaptor, then reconnect them and operate the unit.
- Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

For the U.S.A.

CAUTION:

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD CORPORATION 2967-3, ISHIKAWA-CHO HACHIOJI-SHI, TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT CONFORMS TO DHHS REGULATIONS NO. 21 CFR 1040.10, CHAPTER I., SUBCHAPTER J.

Location: Bottom Panel

Specifications

Format	
System	Compact disc digital audio system Semiconductor laser
Audio	
Frequency response Output level/impedance	,
LINE OUT	0.8 V/2,2 kΩ
Headphone output	10 mW + 10 mW (32 Ω, 1 kHz)
General	
Power supply External DC supply Commercially-available alkaline batteries (LR6/AA) × 4	DC 6 V – 12 V
Battery life (continuous repeat playback (D.A.S.C ON))	The state of the s
Commercially-available alkaline batteries(4)	Approx.6.5 hours
Supplied rechargeable batteries(4)	Approx.3.0 hours
Battery life (continuous repeat playback (D.A.S.C OFF))	•
Commercially-available alkaline batteries(4)	Approx.9.0 hours
Supplied rechargeable batteries(4) Dimensions	Approx.3.5 hours
MINGROUND ADDRESS AND ADDRESS	H: 29.9 mm
	n : 29.9 mm D : 158 mm
Weight (Net)	280 g
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Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

For CANADA DOC REGULATION

"This digital apparatus does not exceed the CLASS B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications."

For the U.S.A. FCC WARNING:

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.